



# CITY OF HOUSTON

Administration and Regulatory Affairs Department  
Strategic Purchasing Division

**Bill White**  
Mayor

Calvin D. Wells  
City Purchasing Agent  
P.O. Box 1562  
Houston, Texas 77251-1562

F. 832.393.8755  
<http://purchasing.houstontx.gov>

March 13, 2009

Subject: **Letter of Clarification No. 1,  
Pavement Marking Vehicle**

Reference: **Invitation to Bid No.: S34-N23173**

To: All Prospective Suppliers:

This letter of Clarification is issued to revise the above referenced solicitation as follows:

1. On Page 12 of 26 of the bid document, delete Specification 2.15.
2. On Page 13 of 26 of the bid document, change Specification 3.2.6 to read **"One Wilden P-4 load pump or City approved equal (used to transfer paint from drum to drum)"**.
3. On Page 14 of 26 of the bid document, change Specification 3.9.1 to read **"There will be six Graco Model 238-377 or City approved equal, grade 300 stainless steel, automatic airless spray guns mounted on the carriages"**.

When issued, Letter(s) of Clarification shall automatically become a part of the bid documents and shall supersede any previous specification(s) and/or provision(s) in conflict with the Letter(s) of Clarification. It is the responsibility of the bidder to ensure that it has obtained all such letter(s). By submitting a bid on this project, bidder shall be deemed to have received all Letter(s) of Clarification and to have incorporated them into this bid.

If you should have any questions, or if further clarification is needed regarding this Invitation for Bid, please contact me.

A handwritten signature in black ink, appearing to read "Larry Benka".

Larry Benka  
Procurement Specialist  
832-393-8727  
[larry.benka@cityofhouston.net](mailto:larry.benka@cityofhouston.net)

cc: Bid File

Attachment: Pages 12 through 14 of 26, Marked Revised March 13, 2009

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**SECTION B**  
**SPECIFICATIONS**  
**PART II**  
**TECHNICAL SPECIFICATIONS**

**ITEM NO. 1: TRUCK MOUNTED PAVEMENT MARKING VEHICLE**  
**REQUISITION 10058377**

**1.0 GENERAL:**

**1.1 Equipment Description:**

1.1.1 The pavement-marking machine detailed in this specification is a truck-mounted, self-propelled, self-contained, high-pressure airless spray unit. The unit must be designed for applying solvent base traffic paint, water borne traffic paint and glass beads. The unit must be capable of applying these materials on clean, dry pavement at a speed range of four to eight MPH. The unit must have the capability of applying two colors in both solid and intermittent line patterns at a wet thickness of 12 to 16 mils with glass bead drop of 8 to 12 pounds per gallon of paint. The operator must be able to view both existing and newly painted lines while seated in the operator's position.

**1.2 Manufacturer Certification:**

1.2.1 By submitting a bid, vendor certifies that the final manufactured unit will perform all specified pavement marking functions and that all components are properly sized for the overall satisfactory performance of the unit for its intended purpose.

**2.0 CAB & CHASSIS:**

- 2.1 Commercial, diesel powered cab & chassis with steel OEM tilt cab, equipped with factory air-conditioning and heating, power steering and tinted glass. Cab & chassis must meet all DOT requirements for operation on public roads. Cab & chassis shall be of sufficient GVWR and chassis length to be compatible with the requirement of the pavement marking equipment and platform body. The Cab & Chassis shall be competent to handle a fully laden machine, including driver and operator.
- 2.2 Bidders submitting bids for this project shall hold a valid franchised dealer license in accordance with the State of Texas Motor Vehicle Commission Code (see specification provision 6.4 on page 8 of 27 of the bid document).
- 2.3 Cab & Chassis will have a minimum 175HP turbocharged/Intercooled diesel engine
- 2.4 Heavy-Duty radiator with oil cooler
- 2.5 4-Speed automatic transmission
- 2.6 80 AMP alternator
- 2.7 OEM White Color
- 2.8 Keyed engine ignition switch
- 2.9 Light switch
- 2.10 Fuel gauge
- 2.11 Strobe light switch
- 2.12 Engine hour meter
- 2.13 Temperature indicator
- 2.14 Low oil pressure indicator
- 2.15 DELETED**
- 2.16 One truck cab mounted light bar, Miniedge, Whelen 94MEDGEP, all amber lenses to be permanently mounted, wired, fused and switched to be fully operational. Switch to be placed in cab of unit in an easily reachable location proximate to the driver
- 2.17 One 5 lb ABC refillable fire extinguisher mounted inside truck cab
- 2.18 Dual exterior mirrors
- 2.19 Fuel Capacity:
  - 2.19.1 Fuel tank shall be sized for an eight-hour shift operation
- 2.20 Precision Speedometer:
  - 2.20.1 0 to 99 MPH
  - 2.20.2 Programmable high and low limits
  - 2.20.3 Audible/visual speed alarms
  - 2.20.4 Resettable job travel odometer

## SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED)

### ITEM NO. 1: TRUCK MOUNTED PAVEMENT MARKING VEHICLE (Continued)

#### 3.0 PAVEMENT MARKING MACHINE:

- 3.1 Referenced approved paint equipment manufacturers:
  - 3.1.1 M-B Companies, Inc  
Attn: Rose Shrimp  
Ph: 570-547-1621 x512  
E-mail: rshrimp@m-bco.com
  - 3.1.2 EZ-Liner Industries  
Attn: Steve Smit  
Ph: 775-265-2279  
E-Mail: steve.smit@ezliner.com
- 3.2 Auxiliary Equipment:
  - 3.2.1 Four pole mounted amber strobe lights
  - 3.2.2 Four pole mounted platform work lights
  - 3.2.3 One gun carriage mounted work light
  - 3.2.4 Two air operated paint agitators "bung entering drum type" with stainless steel shaft and paddles
  - 3.2.5 Intercom - David Clark Master Station U-3800 or City Approved Equal
  - 3.2.6 **One Wilden P-4 load pump or City approved equal (used to transfer paint from drum to drum)**
- 3.3 Construction and Equipment:
  - 3.3.1 Platform:
    - 3.3.1.1 All steel construction
    - 3.3.1.2 Attached to the vehicle frame to the rear of the cab with paint storage racks, paint pumps, control panel, glass bead tank, operator seats, air compressor, air receiver and air compressor drive engine securely mounted to the platform
    - 3.3.1.3 Platform must be sized and positioned to obtain proper weight distribution and fulfill all component needs
    - 3.3.1.4 Steel handrail must be provided, where necessary, along all open areas to prevent accidental falls from the platform deck. The height of the railing must be approximately 42 inches. Openings in the handrail, such as ladder accesses, must latch for safety
  - 3.3.2 Material Container Storage:
    - 3.3.2.1 A material storage rack with three pocket holders to accommodate three 55-gallon drums of paint or solvent must be installed at the rear area of the platform
    - 3.3.2.2 A means to permanently secure the 55-gallons drums to the platform must be provided
- 3.4 Paint Siphon Sets:
  - 3.4.1 The unit must be designed to allow siphoning from the 55-gallon paint containers
  - 3.4.2 Two 1 inch x 12 foot long siphon hose assemblies must be provided for the siphoning and transferring of traffic paint from the drums to the airless paint pumps
  - 3.4.3 Each siphon tube shall have a 2 inch threaded locking collar to thread into the 2 inch bung opening of the drum to securely hold the siphon tube in place. In addition to the 2 inch threaded locking collar, an additional siphon tube locking device shall be located on the siphon tube to allow setting the siphon tube at the correct depth within the drum
  - 3.4.4 A strainer, sized by the vendor, must be provided on the end of the siphon nozzle
- 3.5 Stainless Steel Wetted Construction:
  - 3.5.1 All metal parts that are exposed or come into contact with the traffic paint must be 300 grade (303, 304, and 316) stainless wetted metallurgy
- 3.6 Paint Supply System:
  - 3.6.1 The paint supply system must be engineered and constructed to allow for the application of solvent or water based traffic paints
  - 3.6.2 All fluid wetted plumbing must be high-pressure stainless steel

## **SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED)**

### **ITEM NO. 1: TRUCK MOUNTED PAVEMENT MARKING VEHICLE (Continued)**

- 3.7 Paint Pumps:
  - 3.7.1 Sufficient paint pump capacity to ensure balanced delivery of correct paint volumes through the paint guns on the main gun carriage at the correct delivery pressures and travel speeds for paint application at specified wet-mil thickness must be provided
  - 3.7.2 Provide abrasion and corrosion-resistant displacement rods and cylinders
  - 3.7.3 All wetted parts 303 grade stainless steel
  - 3.7.4 Pumps must have capability to recirculate the paint and be equipped with a pressure bleed valve
- 3.8 Paint Filters and Strainers:
  - 3.8.1 Must be 304 or 316 stainless steel
  - 3.8.2 Must be located at the outlet of each airless paint pump (total of four)
  - 3.8.3 Each filter assembly must include a replaceable 30-mesh stainless filter screen element
  - 3.8.4 Each filter must have a minimum filtration area of eighteen square inches
  - 3.8.5 Filters must be rated for a working pressure of 5,000 psi
  - 3.8.6 The exterior of the filter cylinder housing must be splined for easy hand disassembly and for easy reassembly without the use of hand tools
  - 3.8.7 Each filter must have a combination pressure relief, dump, and priming valve on the outlet side of the high-pressure housing. This combination valve must be of all 300-grade stainless steel and feature a tungsten carbide seat and hardened SST bail
  - 3.8.8 The paint pumps must be protected with individual suction side, 304/316 stainless steel paint strainers
  - 3.8.9 The total surface area of each suction side filter screen must be no less than 22 square inches
  - 3.8.10 Each stainless steel high-pressure airless filter must have two stainless steel 1/4 inch hand gun connectors with paint isolation shut off valves or paint shut off caps
- 3.9 Paint Spray Guns;
  - 3.9.1 **There will be six Graco Model 238-377 or City approved equal, grade 300 stainless steel, automatic airless spray guns mounted on the carriages**
  - 3.9.2 Handgun assembly is included that comprises of a Graco flex gun model 235-549 or City approved equal, with 50 feet of high-pressure hose
  - 3.9.3 Hose rack assembly to hold the handgun and hose when not in use
  - 3.9.4 The unit must have a paint supply designed and plumbed for two-color application and arranged to permit the simultaneous operation of from one to six spray guns
  - 3.9.5 Paint spray guns must be aligned so that the four center guns are set up to spray a 36 inch wide white line
    - 3.9.5.1 Left outside gun set up for spraying a 6 inch black line directly adjacent to the left side of the white line, right outside gun set up for spraying a 6 inch black line directly adjacent to the right side of the white line
  - 3.9.6 Each gun must be individually switched
  - 3.9.7 Paint spray guns must be capable of applying the specified lines at wet thickness of 12 to 16 mils at 4 to 8 MPH maximum striping speed. Edge definition must be clean and sharp between the two applied colors
- 3.10 Glass Bead Tank:
  - 3.10.1 Must be an ASME pressure vessel with 1,000 lbs. reflective glass bead capacity
  - 3.10.2 Tank must be constructed of all steel and must be equipped with a quick - latch opening top with the following items mounted on the vessel
    - 3.10.2.1 Air inlet check valve
    - 3.10.2.2 Preset safety relief valve
    - 3.10.2.3 Air pressure regulator
    - 3.10.2.4 Air pressure gauge
    - 3.10.2.5 Air release valve
    - 3.10.2.6 Quick disconnect fitting
    - 3.10.2.7 Air/moisture separator
    - 3.10.2.8 Air dryer with disposable cartridge